

## CLAIMS

1. A generating apparatus that generates, based on a first volume image for a first disc, a second volume image for a second disc, the generating apparatus comprising:

a conversion unit operable to convert first scenario data written under a first scenario-description scheme for the first disc, into second scenario data written under a second scenario-description scheme for the second disc; and

a formatting unit operable to obtain the second volume image that contains a digital stream and the second scenario data that has been obtained by the conversion unit.

2. The generating apparatus of Claim 1, wherein

the first scenario data is path information defining a playback path of a digital stream contained in the first volume image, and the second scenario data is path information defining a playback path of the digital stream contained in the second volume image, each playback path being comprised of one or more logical playback sections,

under the first scenario-description scheme, playback sections are defined by information specifying starting address and playback time length, and

the conversion performed by the conversion unit is to replace the information specifying starting address and playback time length with starting-time information and

ending-time information.

3. The generating apparatus of Claim 2, wherein

the digital stream contained in the second volume image  
5 includes a plurality of access units,

the generating apparatus includes a generating unit  
operable to generate entry maps that each indicate, for each  
access unit, a starting time and a starting address, and

the path information for the second disc indicates  
10 starting/ending addresses of each playback section, by indirect  
reference via the entry maps.

4. The generating apparatus of Claim 1, wherein

the digital stream contained in the first volume image  
15 and the digital stream contained in the second volume image  
respectively are paired with corresponding path information  
to constitute a title,

the first scenario data and the second scenario data are  
respectively a jump table that a playback apparatus refers to  
20 when jump is performed from an entire menu of the corresponding  
disc to the corresponding title,

the first scenario-description scheme allows two jump  
tables: a first table for the entire first disc; and a second  
table that is created for a domain that the title belongs to,  
25 and

the conversion performed by the conversion unit is to

replace the first and second tables with one jump table for the entire second disc.

5. The generating apparatus of Claim 4, wherein

5       two or more titles that share same image/audio attributes belong to the domain.

6. The generating apparatus of Claim 5, wherein

10       the domain is assigned attribute information representing image/audio attributes of the titles that belong to the domain, and

15       the generating apparatus includes a generating unit operable to generate attribute information for the digital stream contained in the second volume image, based on the attribute information assigned to the domain.

7. The generating apparatus of Claim 1, wherein

20       the first scenario data and the second scenario data are respectively one or more commands that have been incorporated in the corresponding digital stream, and

      the first scenario-description scheme and the second scenario-description scheme are respectively a scheme under which the corresponding commands are described.

25 8. The generating apparatus of Claim 7, wherein

      the commands incorporated in the digital stream of the

first volume image include a combining command for making a playback apparatus execute two or more processes, and

the conversion performed by the conversion unit is to replace the combining command with a number of commands, the number corresponding to a number of processes to be executed according to the combining command.

9. The generating apparatus of Claim 7, wherein

the commands incorporated in the digital stream of the first volume image include a jump command that orders a playback apparatus to jump to another area of the first disc, and

the conversion performed by the conversion unit is to replace the jump command with one or more commands.

10. A generating apparatus that generates, based on a first volume image for a first disc, a second volume image for a second disc which is a recordable disc, the generating apparatus comprising:

a conversion unit operable to convert first scenario data written under a first scenario-description scheme for the first disc, into second scenario data written under a second scenario-description scheme for the second disc; and

a writing unit operable to write, to the second disc, the second scenario data that the conversion unit has obtained, in association with a digital stream for the second disc.

11. A computer-readable program that makes a computer perform procedures for generating, based on a first volume image for a first disc, a second volume image for a second disc, the computer-readable program being for executing:

5       a conversion step of converting first scenario data written under a first scenario-description scheme for the first disc, into second scenario data written under a second scenario-description scheme for the second disc; and

10       a formatting step of obtaining the second volume image that contains a digital stream and the second scenario data that has been obtained at the conversion step.

12. The computer-readable program of Claim 11, wherein

15       the first scenario data is path information defining a playback path of a digital stream contained in the first volume image, and the second scenario data is path information defining a playback path of the digital stream contained in the second volume image, each playback path being comprised of one or more logical playback sections,

20       under the first scenario-description scheme, playback sections are defined by information specifying starting address and playback time length, and

25       the conversion performed at the conversion step is to replace the information specifying starting address and playback time length with starting-time information and ending-time information.

13. The computer-readable program of Claim 12, wherein  
the digital stream contained in the second volume image  
includes a plurality of access units,

5 the computer-readable program is further for executing  
a generating step of generating entry maps that each indicate,  
for each access unit, a starting time and a starting address,  
and

the path information for the second disc indicates  
10 starting/ending addresses of each playback section, by indirect  
reference via the entry maps.

14. The computer-readable program of Claim 11, wherein

the digital stream contained in the first volume image  
15 and the digital stream contained in the second volume image  
respectively are paired with corresponding path information  
to constitute a title,

the first scenario data and the second scenario data are  
respectively a jump table that a playback apparatus refers to  
20 when jump is performed from an entire menu of the corresponding  
disc to the corresponding title,

the first scenario-description scheme allows two jump  
tables: a first table for the entire first disc; and a second  
table that is created for a domain that the title belongs to,  
25 and

the conversion performed at the conversion step is to

replace the first and second tables with one jump table for the entire second disc.

15. The computer-readable program of Claim 14, wherein  
5 two or more titles that share same image/audio attributes belong to the domain.

16. The computer-readable program of Claim 15, wherein  
the domain is assigned attribute information representing  
10 image/audio attributes of the titles that belong to the domain,  
and

the computer-readable program is further for executing  
a generating step of generating attribute information for the  
digital stream contained in the second volume image, based on  
15 the attribute information assigned to the domain.

17. The computer-readable program of Claim 11, wherein  
the first scenario data and the second scenario data are  
respectively one or more commands that have been incorporated  
20 in the corresponding digital stream, and

the first scenario-description scheme and the second  
scenario-description scheme are respectively a scheme under  
which the corresponding commands are described.

25 18. The computer-readable program of Claim 17, wherein  
the commands incorporated in the digital stream of the

first volume image include a combining command for making a playback apparatus execute two or more processes, and

the conversion performed at the conversion step is to replace the combining command with a number of commands, the  
5 number corresponding to a number of processes to be executed according to the combining command.

19. The computer-readable program of Claim 17, wherein

the commands incorporated in the digital stream of the  
10 first volume image include a jump command that orders a playback apparatus to jump to another area of the first disc, and

the conversion performed at the conversion step is to replace the jump command with one or more commands.

15 20. A computer-readable program that generates, based on a first volume image for a first disc, a second volume image for a second disc which is a recordable disc, the computer-readable program being for executing:

a conversion step of converting first scenario data  
20 written under a first scenario-description scheme for the first disc, into second scenario data written under a second scenario-description scheme for the second disc; and

a writing step of writing, to the second disc, the second scenario data that has been obtained at the conversion step,  
25 in association with a digital stream for the second disc.